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## Selected Cancer Sites: All, Breast, Cervical, Colorectal, Lung, and Prostate

This section of the report presents the findings of epidemiological analyses of cancer mortality and incidence for the five selected cancer sites: breast, cervical, colorectal, lung, and prostate. Population data on deaths due to cancer from 1993 to 2003 and new cancer cases from 1990 to 2002 were made available from the statewide cancer registry at the Michigan Department of Community Health.<sup>1</sup> The numbers of estimated deaths due to cancer and estimated new cancer cases for 2005 were available from the American Cancer Society.<sup>2</sup>

### Michigan Mortality and Incidence

Age-adjusted mortality rates in 2003 and age-adjusted incidence rates in 2002 are presented for the selected cancers. These were calculated by the direct age-adjustment method, using the 2000 U.S. population age distribution as the standard population, to allow comparisons across population subgroups.<sup>3</sup>

Comparisons of age-adjusted mortality and incidence rates between gender and racial groups are presented, as are age-specific rates. Michigan mortality and incidence rates for the selected cancer sites are compared to the corresponding national rates. National data were obtained from the National Cancer Institute's SEER program.<sup>4</sup>

The proportions of cases diagnosed at different stages are compared between gender and racial groups to highlight disparities where they exist.

Michigan-specific data on rates of survival from the selected cancers are not available at this time. National data from the National Cancer Institute's SEER program on relative survival rates are presented. The relative survival rate represents the likelihood that a patient will survive their cancer for some specified time (usually five years) after their initial cancer diagnosis.<sup>5</sup>

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<sup>1</sup> Michigan Resident Cancer Incidence File including cases processed by November 16, 2004, and Michigan Resident Death Files, Michigan Department of Community Health (MDCH), Division for Vital Records and Health Statistics.

<sup>2</sup> Cancer Facts and Figures 2005, American Cancer Society. Available at: <http://www.cancer.org/downloads/STT/CAFF2005f4PWSecured.pdf>.

<sup>3</sup> Michigan Department of Community Health (MDCH), Division for Vital Records and Health Statistics.

<sup>4</sup> Ries LAG, Eisner MP, Kosary CL, Hankey BF, Miller BA, Clegg L, Mariotto A, Feuer EJ, Edwards BK (eds). *SEER Cancer Statistics Review, 1975-2002*, National Cancer Institute. Bethesda, MD, [http://seer.cancer.gov/csr/1975\\_2002/](http://seer.cancer.gov/csr/1975_2002/), based on November 2004 SEER data submission, posted to the SEER web site 2005. A continuing program of the National Cancer Institute (NCI), the SEER program collects data on a routine basis from designated population-based cancer registries in various areas of the country. Trends in cancer incidence, mortality and patient survival in the United States are derived from this database. SEER data are collected from nine or twelve geographic areas that represent, respectively, an estimated 9 or 14% of the US population. The long-term incidence trends and survival data for this report are from five states-- Connecticut, Hawaii, Iowa, New Mexico, and Utah--and four metropolitan areas-- Detroit, Atlanta, San Francisco-Oakland, and Seattle-Puget Sound. Additional tables provide more recent incidence rates and trends for SEER from twelve areas (the nine areas above plus Los Angeles, San Jose-Monterey, and the Alaska Native Registry) since 1992. In 2002 Kentucky, Greater California (all remaining uncovered counties), Louisiana and New Jersey all became SEER participants.

<sup>5</sup> Relative survival rates for cases diagnosed 1995-2000.

### County Mortality and Incidence

Ten-year age-adjusted incidence and mortality rates are presented for the selected cancers for each county. Rates were calculated by the direct age-adjustment method using the 2000 US population age distribution, and annual state population estimates based on actual size of the county populations for years 1993 to 2002 and 1994 to 2003 were used in calculating ten-year incidence and mortality rates, respectively. Z tests were used to compare rates among counties, identifying counties with significantly higher or lower rates than the all-county rate. In conducting the Z tests, the age-adjusted rate for all counties combined was calculated including only deaths in the state for which the county was known. Differences in age-adjusted incidence and mortality rates were tested at 95% confidence levels.

### Stage at Diagnosis, by Site and by County

The percentages of cancer cases diagnosed at the localized stage (Breast, Colorectal, and Prostate Cancer) and at the in-situ stage (Cervical Cancer) are presented for each county for the time periods from 1990 to 1992 and 2000 to 2002 to highlight where changes in the percentages of cases diagnosed at a localized or in-situ stage have occurred. The percentage of cases localized at diagnosis is calculated out of all invasive cancers of the specific sites; the percentage of cases in-situ at diagnosis is calculated out of all invasive and in-situ cancers of the specific sites. To illustrate changes in stage at diagnosis, counties were ranked according to the percentage of cases that were diagnosed while the cancer was still localized and/or in-situ in the first three-year period. Counties were divided into quartiles for these ranked percentages. The same percentage ranges were used to classify counties during the second three-year period so that changes could be observed visually by comparing maps for each period.

Conclusions from this analysis by county must take into consideration the various factors contributing to changes in stage at diagnosis at the county level. One factor to consider is the limitation of the low number of cases in some counties. Several counties had fewer than 20 reported cancer cases for at least one of the time periods and cancer sites. Therefore, a decrease in the percentage of cases localized at diagnosis could mean a relatively small change in the number of cases at each stage. Also, it is important to note that changes in reporting and staging practices could have changed over time within a county. Usually increases in the percentage of cases localized or in-situ at diagnosis are associated with an increase in screening but an apparent decline in the percentage localized or in-situ does not necessarily reflect changes in prevention practices or quality of care. Yet, as an illustration of changing trends in stage at diagnosis, comparing the maps for each time period reveals where broad changes have occurred in the state as a whole.

At the time of these analyses the stage of diagnosis data for 2001 was not available for Kent County and, therefore, Kent County was excluded from all map illustrations documenting stage at diagnosis by county.

### Average Mammography Workload, by County

Mammography workload data were obtained from the Michigan Department of Community

Health's Radiation Safety Section.<sup>6</sup> Monthly patient workloads are provided by mammography facility staff that assist during annual inspections of mammography machines. The data received can accurately reflect the mammography facility's true patient workload, but other times will only represent the facility person's best estimate of the total mammography patient workload. This analysis was based on the inspections of 4,129 machines with only 57 of these machines having no workload data recorded. For different reasons, one mammography machine may get inspected more than once in a calendar year, but the data used in this analysis only considers one inspection per machine when determining total mammography workload.

The average number of mammograms per 1000 women over the age of 40 was calculated by county for two time periods, 1996-1999 and 2000-2003, using the 1998 and 2002 Michigan female aged 40 and older populations, respectively. The percent change in mammography workload for each county was then calculated by using the average number of mammograms for the two time periods. It is important to note that the number of mammography machines per county may vary from year to year, and the percent change calculated for each county is not adjusted for any fluctuation in the number of mammography machines operating within each county. A follow-up survey has been planned to gather more detailed information on mammography facilities throughout the state of Michigan.

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<sup>6</sup> Michigan Department of Community Health, Radiation Safety Section obtained November 2004.

## Summary

Analyses of deaths due to cancer and new cancer cases at all sites combined are shown in Tables 1 and 2. Most cancer cases and deaths occur in the population aged 55 years and older.

Following the tables showing statistics for all cancer sites combined are tables showing statistics for five sites: breast cancer (Tables 3 through 11), cervical cancer (Tables 12 through 19), colorectal cancer (Tables 20 through 27), lung cancer (Tables 28 through 35), and prostate cancer (Tables 36 through 43).

Cancer mortality and incidence rates are higher in the older age groups for breast, colorectal, lung and prostate cancer. Cervical cancer mortality rates also increase with age, however cervical cancer incidence rates among women age 40 years and older stabilize and then decrease.

Mortality rates for each of the sites are higher among blacks than among whites. Although breast cancer incidence rates are higher in white women, breast cancer mortality rates are higher in black women (black to white rate ratio of 0.9 for incidence and 1.4 for mortality). For the other four cancer sites, incidence rates, like mortality rates, are higher among blacks than whites. The largest ratios of mortality rates were the ratios of black to white for cervical cancer and prostate cancer mortality rates; 1.8 and 1.9, respectively. The ratio of black to white cervical cancer incidence rates was 1.6, and the ratio of black to white prostate cancer incidence rates was 1.7. Colorectal cancer black to white ratios for mortality and incidence rates were both 1.4 and lung cancer ratios for mortality and incidence rates were 1.2 and 1.3, respectively.

Five-year survival rates for each of the five cancer sites reveal a disparity in survival between blacks and whites. For breast and cervical cancer, blacks have a lower survival rate than whites even when cancers are detected at the same stage. The five-year survival rates for colorectal cancer are also lower for blacks than whites. Survival rates for lung cancer detected at a localized, regional, or distant stage are lower for blacks than whites. When prostate cancer is detected at a localized or regional stage, the five-year survival rates are 100% for both blacks and whites, but as cancers are detected at a later stage, the five-year survival rates among blacks become lower than the rates among whites. Compounding this survival disparity between races is the fact that in 2002, breast, cervical, and lung cancer cases were diagnosed at the localized stage with less frequency among blacks as compared to whites. However, prostate cancer cases were diagnosed more frequently in the localized state among blacks compared to whites. Colorectal cancer cases were diagnosed at the localized stage with approximately the same frequency among whites and blacks.

Significant differences in incidence and mortality rates among counties for each of the five sites over a ten-year period are shown in Figures 1, 2, 4, 5, 7, 8, 10, 11, 13 and 14.

Figures 3, 6, 9, 12, and 15, present maps of the percentage of cases diagnosed when the cancer was at the localized and/or in-situ stage between the time periods of 1990 through 1992 and 2000 through 2002. Cancers diagnosed at an early stage improved most dramatically for prostate, although improvements in early diagnosis are also seen for breast, cervical and colorectal cancers (changes in the state as a whole are listed in Tables 3, 4, 5, 6, and 7 in the Appendix to this report). Statewide the percentage of prostate cancer cases detected while localized changed from 59.2% in 1990-1992 to 76.4% in 2000-2002. Detection of breast cancer while localized, cervical cancer while in-situ, and colorectal cancer while localized showed modest improvement in Michigan. In the timeframe of 1990-1992, 55.4% of breast cancers were diagnosed at the localized stage in Michigan; 60.0% of breast cancer were diagnosed at the localized stage in the time period from 2000 through 2002. Cervical cancer detection while in-situ improved from 81.1% in 1990-1992 to 87.2% in 2000-2002. Colorectal cancer detection at the localized stage improved from 32.3% in 1990-1992 to 38.3% in 2000-2002. Lung cancer detection at the localized stage did not noticeably change (statewide the percentage of cases detected while the cancer was localized went from 19.8% to 18.7%). Observed differences in the percentage of cancers diagnosed while localized or in-situ may possibly be due to changes in early detection, changes in coding or pathology review and reporting, changes in record keeping, or due to the introduction of new medical practitioners or facilities.



Table 1.

Number of Cancer Deaths and New Cancer Cases  
by *Age Group* and *Gender*, All Sites, Michigan 2002-03

		All Ages	Under 35	35-54	55-74	75 and Over
Deaths, 2003	Total	19,574	232	2,396	8,277	8,669
	Males	10,107	126	1,213	4,511	4,257
	Females	9,467	106	1,183	3,766	4,412
New Cases, 2002	Total	49,872	1,766	9,478	24,080	14,548
	Males	26,209	799	4,087	14,011	7,312
	Females	23,639	967	5,387	10,053	7,232

Table 2.

Cancer Mortality and Incidence Rates  
by *Gender* and *Race*, All Sites, Michigan 2002-03

		Rate per 100,000*		Ratio
		Blacks	Whites	Blacks/Whites
2003 Mortality	Total	233.4	187.7	1.2
	Males	297.9	230.5	1.3
	Females	191.2	158.9	1.2
2002 Incidence	Total	560.7	478.3	1.2
	Males	736.0	560.6	1.3
	Females	441.5	420.3	1.1

\*Rates are age-adjusted and computed by race and gender.

Table 3.

### Estimated Number of Breast Cancer Deaths and New Breast Cancer Cases, Michigan 2005

Deaths	1,380
New Cases	7,210

Table 4.

### Number of Breast Cancer Deaths and New Breast Cancer Cases by *Age Group*, Michigan 2002-03

	All Ages	Under 35	35-54	55-74	75 and Over
Deaths, 2003	1,425	14	330	531	550
New Cases, 2002	6,998	119	2,148	3,155	1,576

Table 5.

## Breast Cancer Mortality Rates, Michigan 2003 vs. US 2002

	Number in Michigan	Age-Adjusted Rate*	
		Michigan (2003)	US-SEER (2002)
Total	1,425	24.7	25.5
Whites	1,189	23.7	24.9
Blacks	219	32.9	34.1

\*Rate per 100,000 race- and gender-specific population.

Table 6.

## Breast Cancer Incidence Rates, Michigan 2002 vs. US 2002

	Number in Michigan	Age-Adjusted Rate*	
		Michigan (2002)	US-SEER (2002)
Total	6,998	127.4	132.9
Whites	6,008	127.1	138.2
Blacks	803	120.6	120.0

\*Rate per 100,000 age- and gender-specific population.

Table 7.

### Age-specific Breast Cancer Mortality Rates, Michigan 2003

	Number	Rate*
25-39 Years	46	4.5
40-49 Years	154	19.2
50-64 Years	406	47.5
65 Years and Over	819	113.0

\*Rate per 100,000 age- and gender-specific population.

Table 8.

### Age-specific Breast Cancer Incidence Rates, Michigan 2002

	Number	Rate*
25-39 Years	321	30.9
40-49 Years	1151	144.1
50-64 Years	2474	299.9
65 Years and Over	3049	422.5

\*Rate per 100,000 age- and gender-specific population.

Table 9.

### Breast Cancer Five-Year Relative Survival Rates by Stage at Diagnosis and *Race*, US 1995-2001

	Total %	White %	Black %
All stages	88.2	89.5	75.9
Localized	97.9	98.5	92.2
Regional	81.3	82.9	68.3
Distant	26.1	27.7	16.3
Unknown	55.6	57.5	46.4

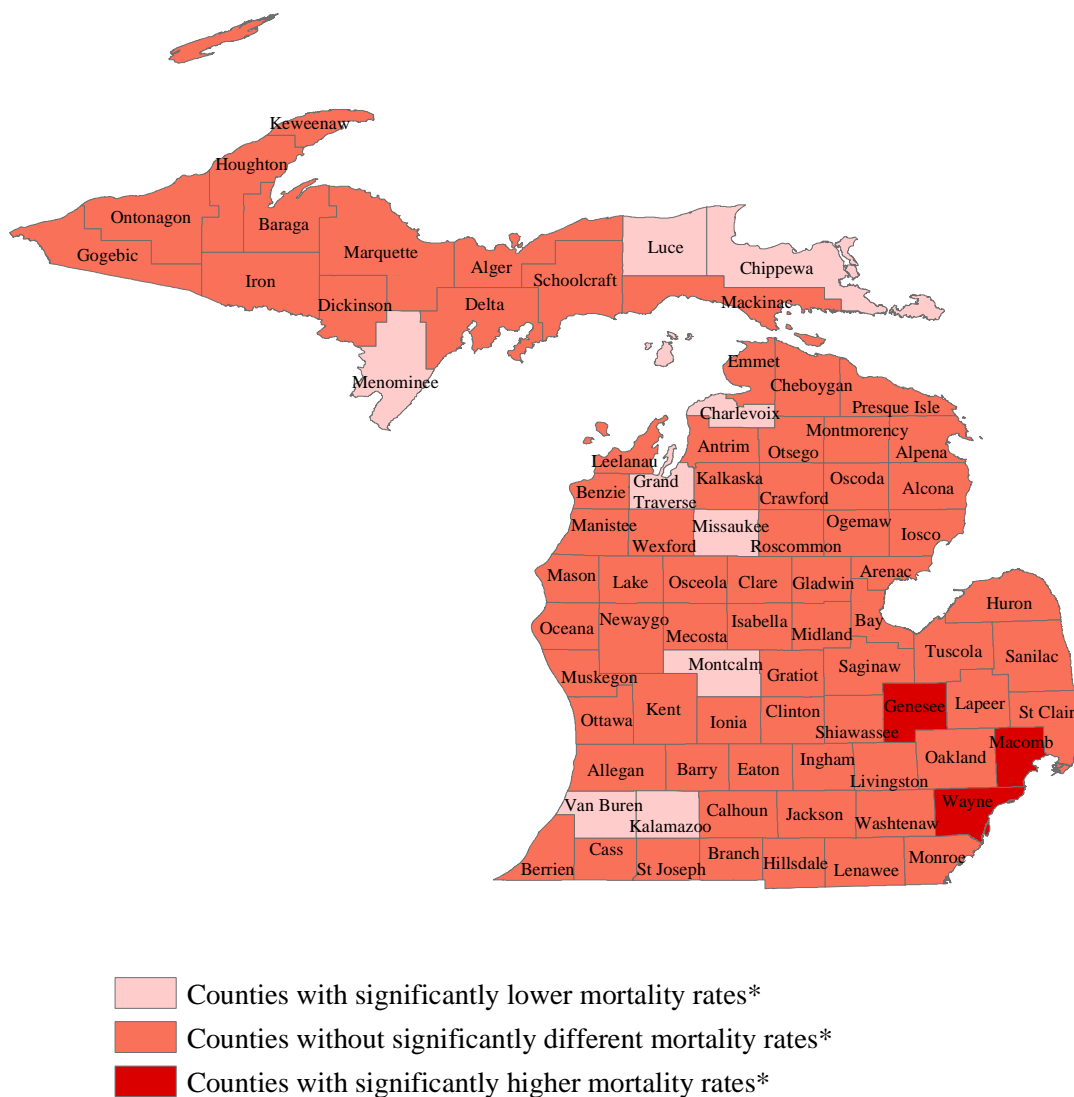
Table 10.

### Numbers and Percentages of Invasive Breast Cancer by Stage at Diagnosis and *Race*, Michigan Residents, 2002

		Stage at Diagnosis							
	Total Number	Localized		Regional		Distant		Unknown	
		Number	%	Number	%	Number	%	Number	%
Total	6,999	4,251	60.7	1,746	24.9	288	4.1	714	10.2
Whites	6,008	3,752	62.5	1,497	24.9	214	3.6	545	9.1
Blacks	803	399	49.7	201	25.0	70	8.7	133	16.6

Figure 1.

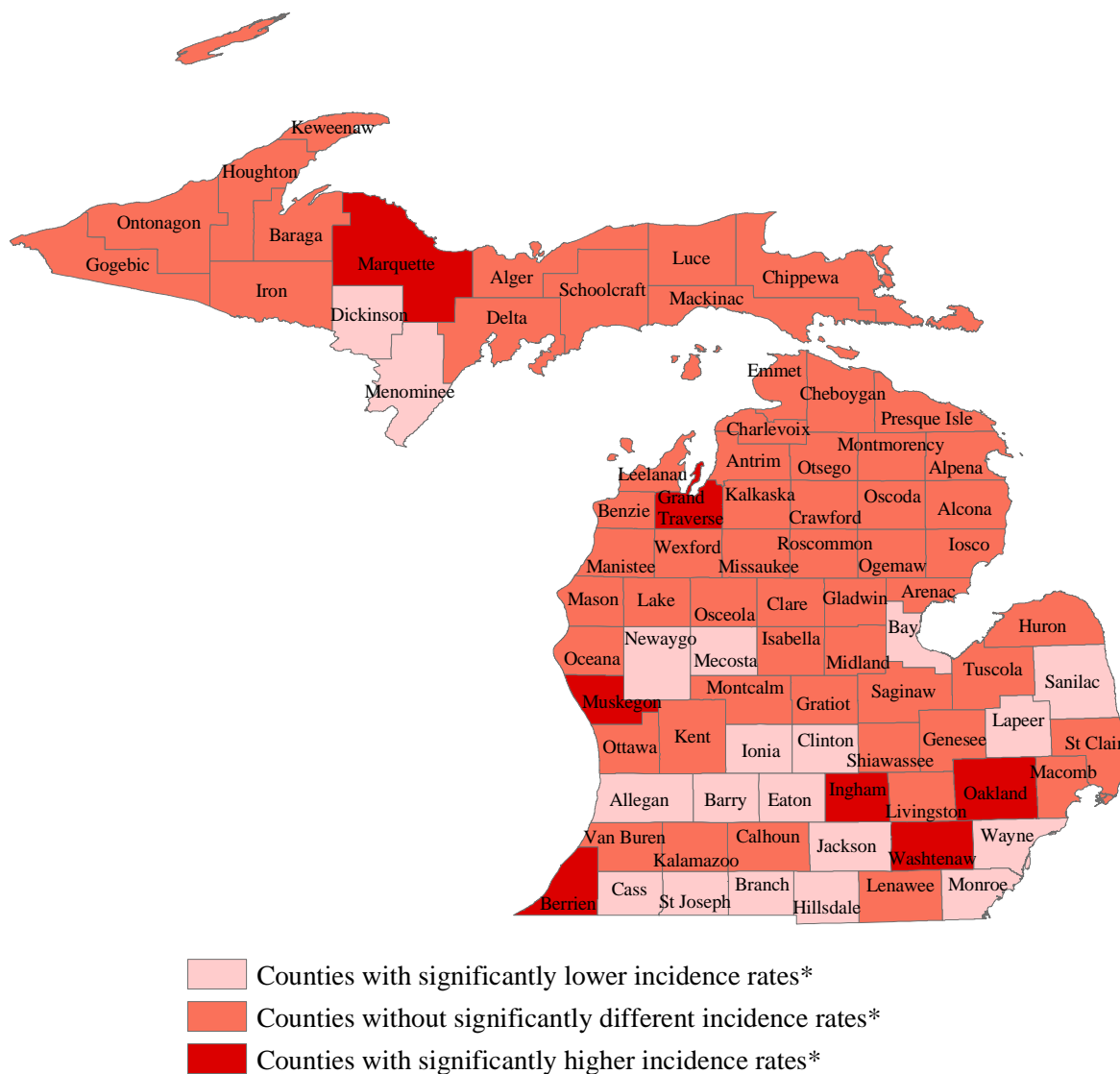
## Breast Cancer Mortality Rates by County, 1994-2003



\*Differences in age-adjusted mortality rates were statistically tested at 95% confidence levels to compare each county with the all-county rate.

Figure 2.

## Breast Cancer Incidence Rates by County, 1993-2002



\*Differences in age-adjusted incidence rates were statistically tested at 95% confidence levels to compare each county with the all-county rate.

Figure 3.

## Percentage of Breast Cancer Cases Localized at Diagnosis by County

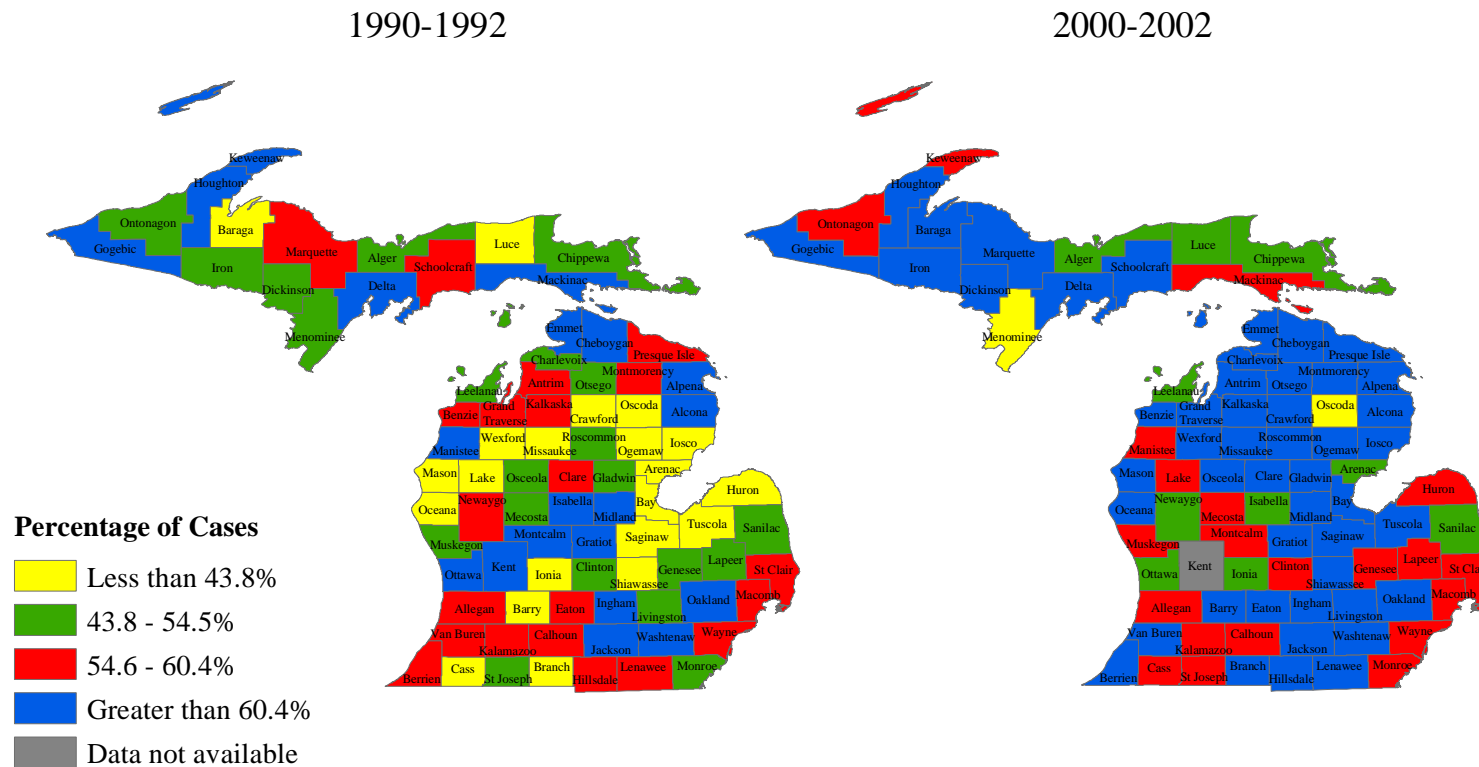




Table 11.

## Mammography Workloads by County, 1996-1999 and 2000-2003

County	Avg mammograms / 1000 female >= 40 years (1996-1999) *based on 1998 population	Avg mammograms / 1000 females >= 40 years (2000-2003) *based on 2002 population	% Change*
Ionia	93.4	280.1	199.9
Cass	97.7	213.1	118.1
Monroe	116.4	241.0	107.1
Gladwin	245.1	501.2	104.5
St. Clair	475.7	882.4	85.5
Houghton	344.1	612.3	78.0
Crawford	710.8	1246.1	75.3
Berrien	373.3	630.5	68.9
Arenac	200.6	322.2	60.6
Bay	332.9	531.5	59.6
Newaygo	288.5	449.8	55.9
Barry	238.0	366.3	53.9
Charlevoix	373.1	557.4	49.4
Isabella	520.3	768.7	47.7
Otsego	612.6	881.6	43.9
Eaton	209.0	300.4	43.8
Mecosta	573.7	811.6	41.5
Manistee	268.0	372.1	38.8
Van buren	236.3	327.9	38.8
Montcalm	426.9	592.4	38.8
Saginaw	521.4	722.7	38.6
St. Joseph	329.0	453.6	37.9
Allegan	431.1	591.8	37.3
Kalamazoo	606.6	825.6	36.1
Kent	585.7	794.2	35.6
Calhoun	516.3	697.2	35.0
Ottawa	225.9	301.6	33.5
Genesee	599.3	777.1	29.7
Livingston	258.4	332.7	28.8
Kalkaska	346.3	444.8	28.5
Wexford	805.4	1029.2	27.8
Cheboygan	420.3	533.3	26.9
Shiawassee	414.5	516.8	24.7
Sanilac	258.2	321.9	24.6
Midland	653.9	796.8	21.9
Huron	418.6	508.2	21.4
Menominee	627.7	749.2	19.4
Schoolcraft	516.8	609.2	17.9
Oakland	707.6	832.6	17.7

# Selected Cancer Sites

## Breast Cancer

County	Avg mammograms / 1000 (1996-1999)	Avg mammograms / 1000 (2000-2003)	% Change*
Hillsdale	295.7	345.3	16.8
Wayne	425.9	492.0	15.5
Gratiot	621.2	717.0	15.4
Iron	296.4	341.1	15.1
Muskegon	556.8	640.5	15.0
Clare	260.6	298.6	14.5
Lenawee	375.7	424.4	12.9
Ogemaw	692.8	782.4	12.9
Ingham	967.6	1092.7	12.9
Macomb	413.2	459.1	11.1
Marquette	801.5	885.1	10.4
Emmet	1242.5	1352.5	8.9
Lapeer	343.2	373.4	8.8
Washtenaw	1152.5	1250.3	8.5
Chippewa	428.6	461.8	7.7
Osceola	259.3	271.1	4.6
Jackson	564.0	583.1	3.4
Clinton	182.6	188.4	3.1
Gogebic	457.8	453.3	-1.0
Dickinson	814.1	794.3	-2.4
Grand Traverse	1234.7	1200.2	-2.8
Iosco	600.5	580.9	-3.3
Mason	612.2	567.9	-7.2
Branch	417.0	371.1	-11.0
Luce	920.1	809.4	-12.0
Baraga	532.8	467.2	-12.3
Oceana	440.6	381.0	-13.5
Leelanau	135.7	117.0	-13.8
Alpena	888.1	754.4	-15.1
Alger	321.3	270.1	-16.0
Benzie	332.7	270.8	-18.6
Ontonagon	208.7	165.5	-20.7
Tuscola	156.1	120.8	-22.6
Lake	184.5	137.5	-25.5
Presque isle	346.8	253.9	-26.8
Roscommon	454.5	213.3	-53.1
Alcona	n/a	n/a	n/a
Antrim	n/a	n/a	n/a
Delta	0.0	287.8	n/a
Keweenaw	n/a	n/a	n/a
Mackinac	0.0	402.2	n/a
Missaukee	n/a	n/a	n/a
Montmorency	n/a	n/a	n/a
Oscoda	n/a	n/a	n/a

\*n/a = no mammography information available for this county

Table 12.

Estimated Number of Cervical Cancer Deaths and  
New Cervical Cancer Cases,  
Michigan 2005

Deaths	*
New Cases	340

\*Not Available

Table 13.

Number of Cervical Cancer Deaths and  
New Cervical Cancer Cases by *Age Group*,  
Michigan 2002-03

	All Ages	Under 35	35-54	55-74	75 and Over
Deaths, 2003	104	5	36	37	26
New Cases, 2001	382	64	198	79	41

Table 14.

### Cervical Cancer Mortality Rates, Michigan 2003 vs. US 2002

	Number in Michigan	Age-Adjusted Rate*	
		Michigan (2003)	US-SEER (2002)
Total	104	1.9	2.5
Whites	81	1.7	2.3
Blacks	21	3.1	5.0

\*Rate per 100,000 age- and gender-specific population.

Table 15.

### Cervical Cancer Incidence Rates, Michigan 2002 vs. US 2002

	Number in Michigan	Age-Adjusted Rate*	
		Michigan (2002)	US-SEER (2002)
Total	382	7.3	7.2
Whites	290	6.7	6.8
Blacks	76	10.9	10.3

\*Rate per 100,000 age- and gender-specific population.

Table 16.

## Age-specific Cervical Cancer Mortality Rates, Michigan 2003

	Number	Rate*
25-39 Years	7	0.7
40-49 Years	20	2.5
50-64 Years	31	3.6
65 Years and Over	45	6.2

\*Rate per 100,000 age- and gender-specific population.

Table 17.

## Age-specific Cervical Cancer Incidence Rates, Michigan 2002

	Number	Rate*
25-39 Years	112	10.8
40-49 Years	99	12.4
50-64 Years	95	11.5
65 Years and Over	72	10.0

\*Rate per 100,000 age- and gender-specific population.

Table 18.

### Cervical Cancer Five-Year Relative Survival Rates by Stage at Diagnosis and *Race*, US 1995-2001

	Total %	White %	Black %
All stages	73.3	74.6	66.1
Localized	92.4	92.8	88.4
Regional	54.7	55.3	48.2
Distant	16.5	17.7	12.5
Unknown	61.4	64.5	56.6

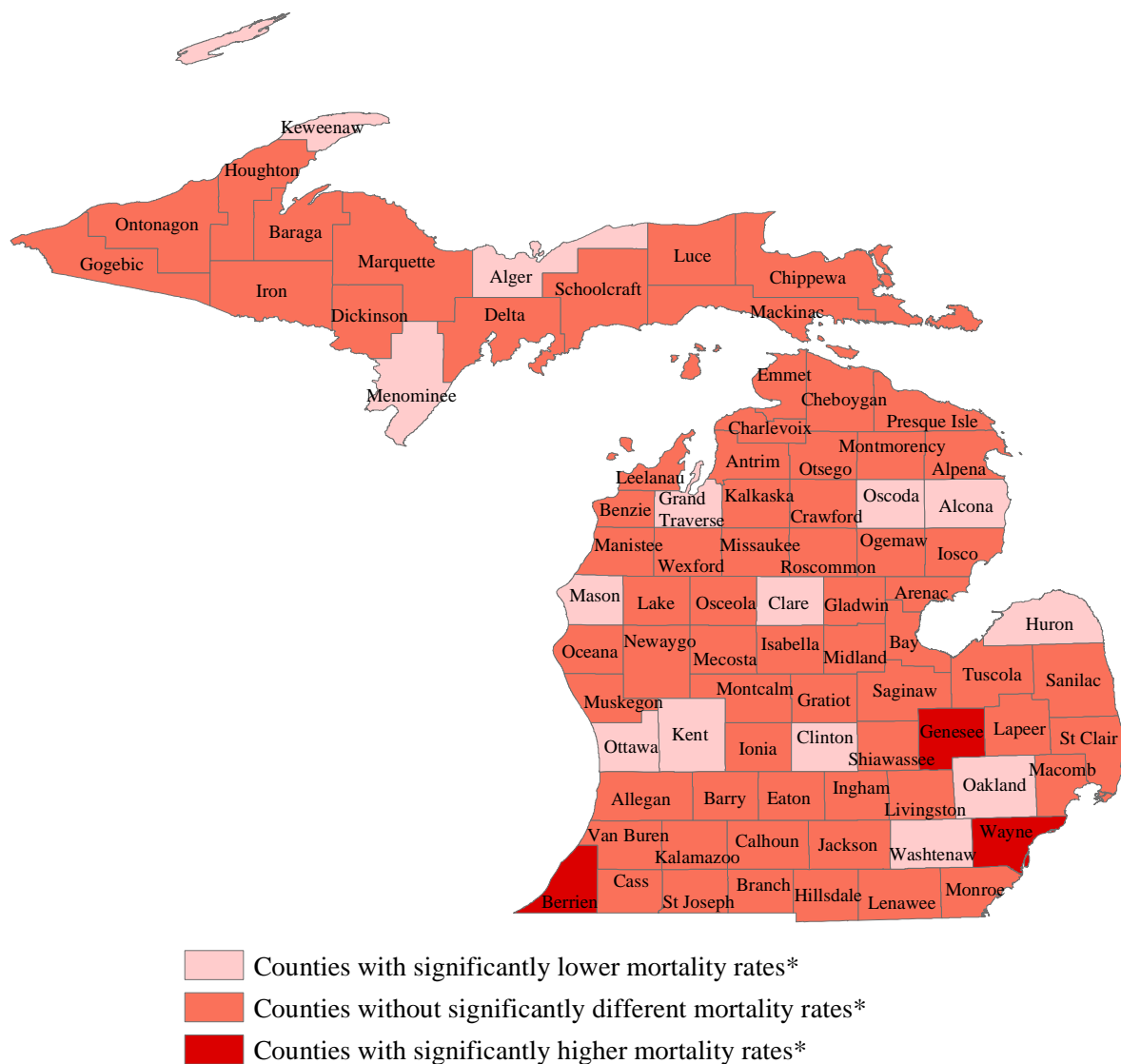
Table 19.

### Numbers and Percentages of Invasive Cervical Cancer (Primary Site) by Stage at Diagnosis and *Race*, Michigan 2002

		Stage at Diagnosis							
	Total Number	Localized		Regional		Distant		Unknown	
		Number	%	Number	%	Number	%	Number	%
Total	382	193	50.5	93	24.3	39	10.2	57	14.9
Whites	290	161	55.5	68	23.4	29	10.0	32	11.0
Blacks	76	26	34.2	21	27.6	8	10.5	21	27.6

Figure 4.

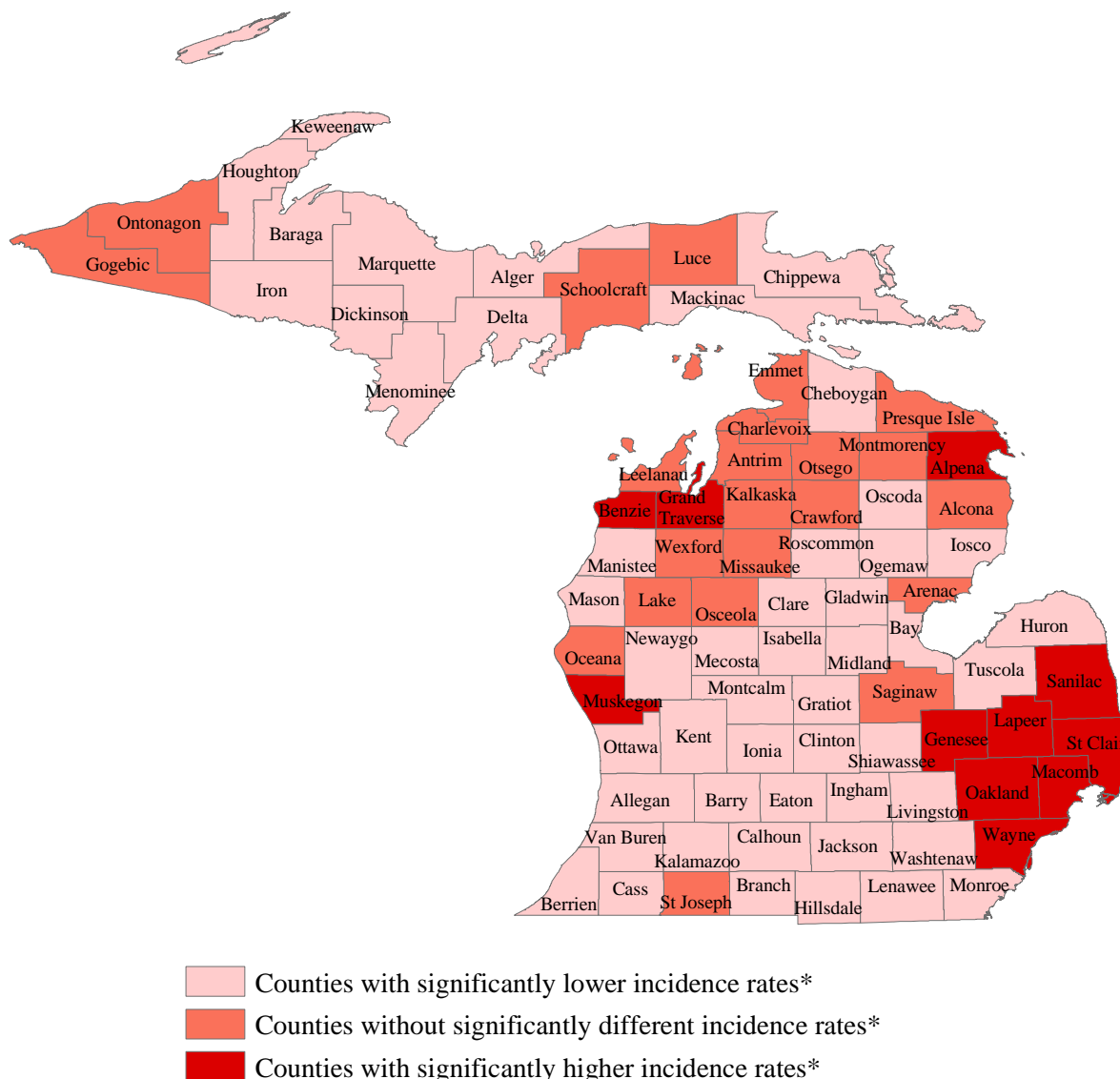
## Cervical Cancer Mortality Rates by County, 1994-2003



\*Differences in age-adjusted mortality rates were statistically tested at 95% confidence levels to compare each county with the all-county rate.

Figure 5.

## In-situ or Invasive Cervical Cancer Incidence Rates by County, 1993-2002



\*Differences in age-adjusted incidence rates were statistically tested at 95% confidence levels to compare each county with the all-county rate.



Figure 6.

## Percentage of Cervical Cancer Cases In-situ at Diagnosis by County

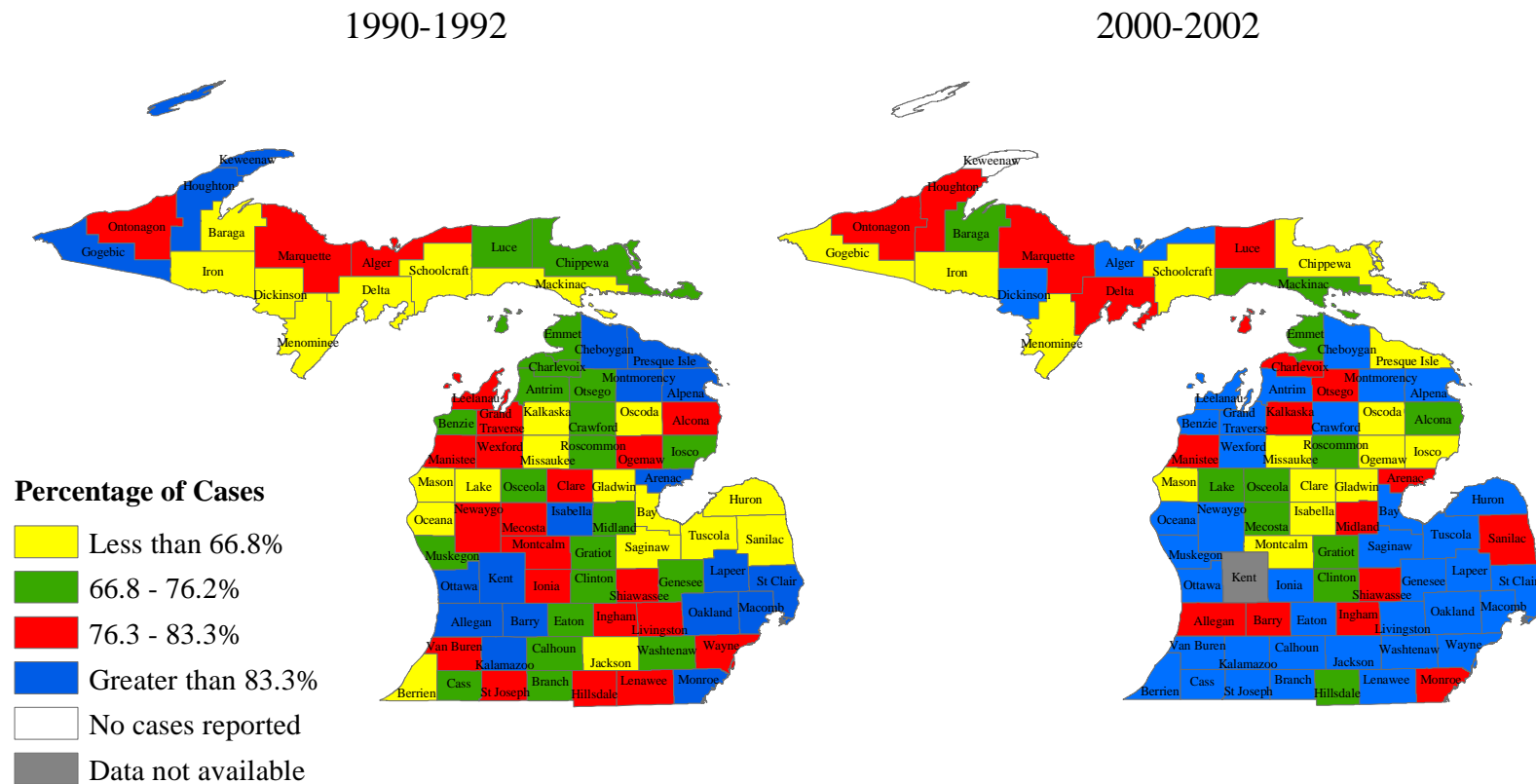


Table 20.

Estimated Number of Colorectal Cancer Deaths and  
New Colorectal Cancer Cases,  
Michigan 2005

Deaths	1,870
New Cases	4,830

Table 21.

Number of Colorectal Cancer Deaths and  
New Colorectal Cancer Cases  
by *Age Group* and *Gender*,  
Michigan 2002-03

		All Ages	Under 35	35-54	55-74	75 and Over
Deaths, 2003	Total	1,916	12	184	690	1,030
	Males	951	6	108	397	440
	Females	965	6	76	293	590
New Cases, 2002	Total	5,421	63	799	2,353	2,206
	Males	2,676	31	432	1,289	924
	Females	2,741	32	367	1,062	1,280

Table 22.

## Colorectal Cancer Mortality Rates by *Gender*, Michigan 2003 vs. US 2002

	Number in Michigan	Age-Adjusted Rate*	
		Michigan (2003)	US-SEER (2002)
Total	1,916	18.8	19.6
Males	951	22.5	23.8
White Males	805	21.6	23.2
Black Males	136	30.7	33.4
Females	965	16.0	16.5
White Females	816	15.2	16.0
Black Females	140	22.0	22.8

\*Rate per 100,000 race- and gender-specific population.

Table 23.

## Colorectal Cancer Incidence Rates by *Gender*, Michigan 2002 vs. US 2002

	Number in Michigan	Age-Adjusted Rate*	
		Michigan (2002)	US-SEER (2002)
Total	5,421	54.0	51.9
Males	2,676	61.8	59.9
White Males	2,257	59.2	58.5
Black Males	363	81.2	72.9
Females	2,741	47.8	45.6
White Females	2,281	45.2	44.8
Black Females	392	62.3	54.5

\*Rate per 100,000 race- and gender-specific population.

Table 24.

## Age-specific Colorectal Cancer Mortality Rates by *Gender*, Michigan 2003

	Total		Males		Females	
	Number	Rate*	Number	Rate*	Number	Rate*
25-39 Years	27	1.3	14	1.4	13	1.3
40-49 Years	78	4.9	45	5.7	33	4.1
50-64 Years	354	21.2	213	26.0	141	16.5
65 Years and Over	1,454	117.6	677	132.3	777	107.2

\*Rate per 100,000 age- and gender-specific population.

Table 25.

## Age-specific Colorectal Cancer Incidence Rates by *Gender*, Michigan 2002

	Total		Males		Females	
	Number	Rate*	Number	Rate*	Number	Rate*
25-39 Years	136	6.5	76	7.3	60	5.8
40-49 Years	360	22.8	179	22.9	181	22.7
50-64 Years	1,281	79.4	749	94.9	531	64.4
65 Years and Over	3,627	294.4	1,667	326.6	1,957	271.2

\*Rate per 100,000 age- and gender-specific population.

Table 26.

Colorectal Cancer Five-Year Relative Survival Rates  
by Stage at Diagnosis, *Gender* and *Race*, US 1995-2001

	Total %	Males		Females	
		White %	Black %	White %	Black %
All stages	64.1	65.6	55.9	64.4	54.3
Localized	90.4	92.0	86.1	89.6	82.3
Regional	67.9	68.8	61.6	68.8	60.5
Distant	9.7	9.8	8.4	10.1	7.7
Unknown	35.4	39.5	43.2	31.2	34.6

Table 27.

Numbers and Percentages of Invasive Colorectal Cancer  
(Primary Site) by Stage at Diagnosis and *Race*,  
Michigan 2002

	Total Number	Stage at Diagnosis							
		Localized		Regional		Distant		Unknown	
		Number	%	Number	%	Number	%	Number	%
Total	5,421	2,140	39.5	1,706	31.5	833	15.4	742	13.7
Whites	4,540	1,789	39.4	1,500	33.0	685	15.1	566	12.5
Blacks	755	301	39.9	181	24.0	135	17.9	138	18.3

Figure 7.

## Colorectal Cancer Mortality Rates by County, 1994-2003

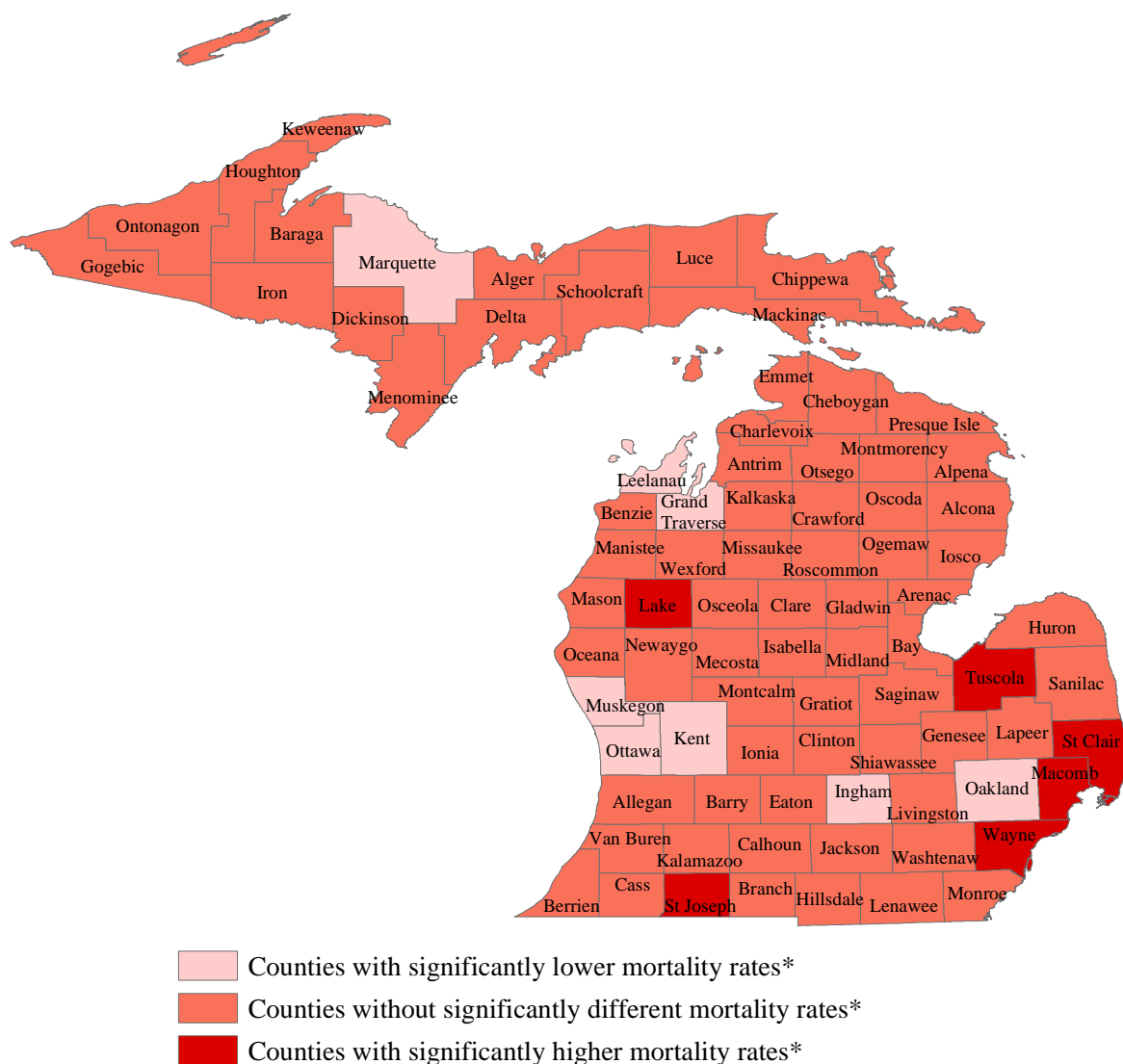
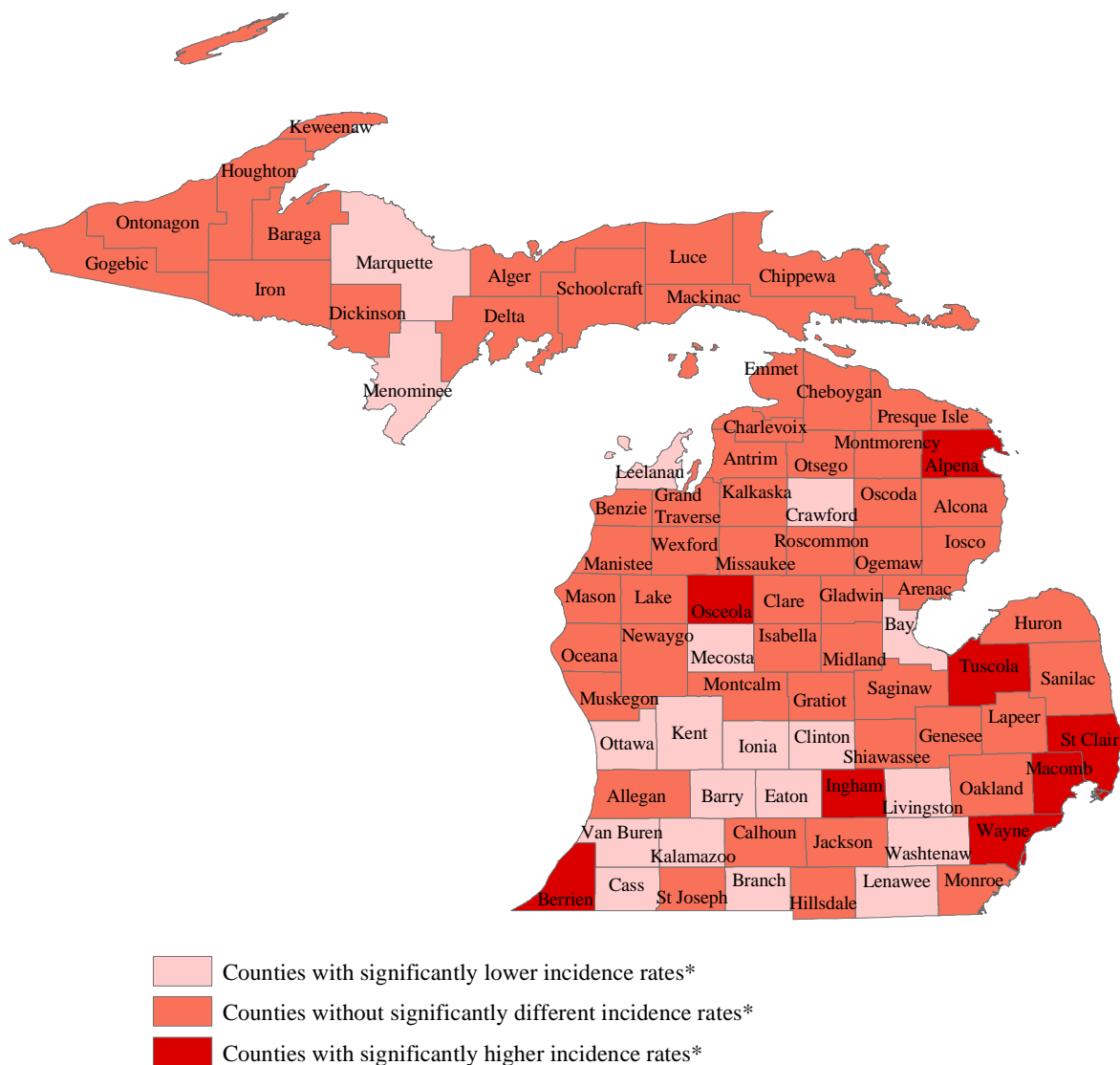


Figure 8.

## Colorectal Cancer Incidence Rates by County, 1993-2002



\*Differences in age-adjusted incidence rates were statistically tested at 95% confidence levels to compare each county with the all-county rate.

Figure 9.

## Percentage of Colorectal Cancer Cases Localized at Diagnosis by County

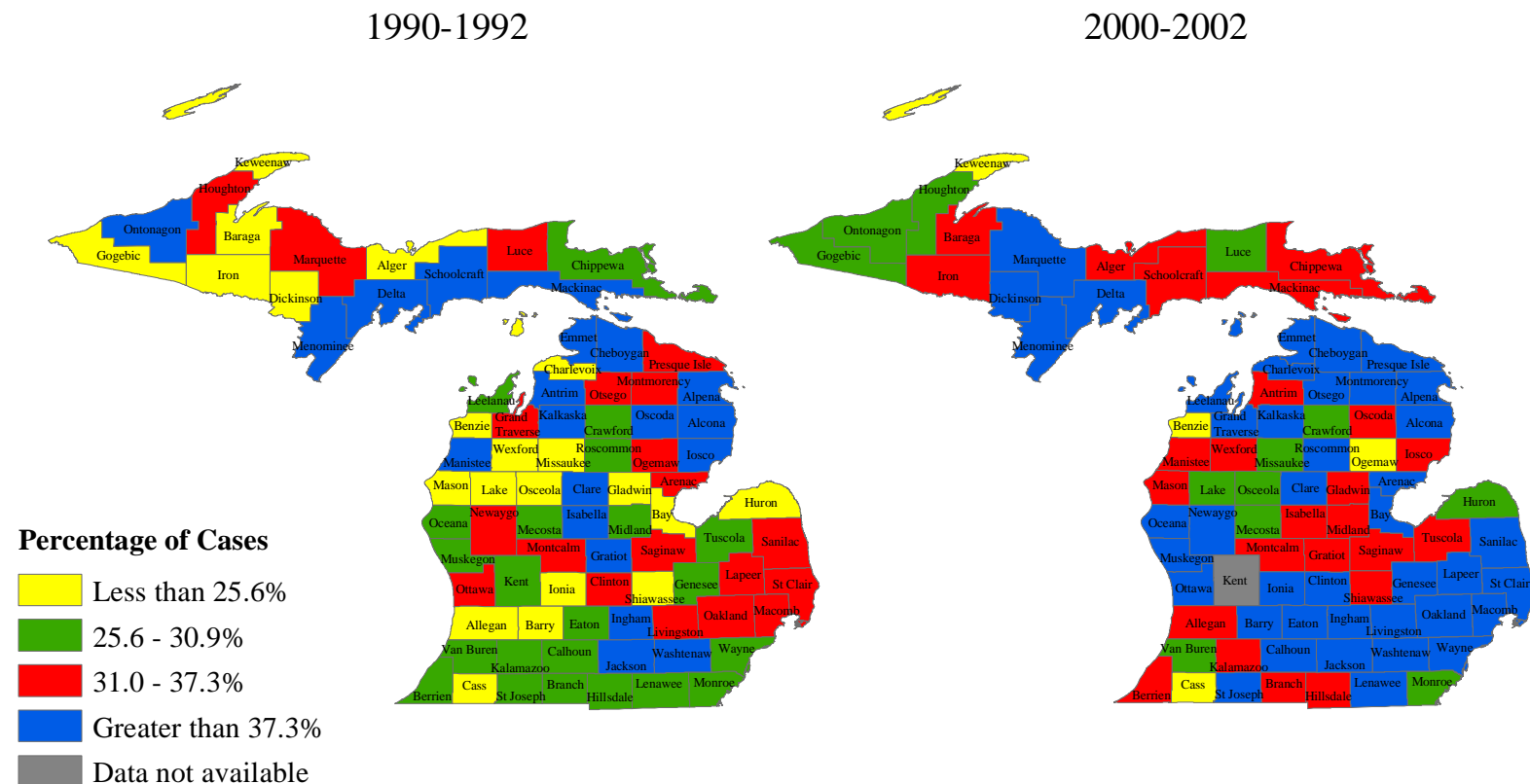




Table 28.

Estimated Number of Lung Cancer Deaths and  
New Lung Cancer Cases,  
Michigan 2005

Deaths	5,790
New Cases	6,110

Table 29.

Number of Lung Cancer Deaths and  
New Lung Cancer Cases  
by *Age Group* and *Gender*,  
Michigan 2002-03

		All Ages	Under 35	35-54	55-74	75 and Over
Deaths, 2003	Total	5,680	6	579	2,881	2,214
	Males	3,174	4	333	1,641	1,196
	Females	2,506	2	246	1,240	1,018
New Cases, 2002	Total	7,020	13	790	3,902	2,315
	Males	3,892	6	428	2,198	1,260
	Females	3,126	7	362	1,702	1,055

Table 30.

### Lung Cancer Mortality Rates by *Gender*, Michigan 2003 vs. US 2002

	Number in Michigan	Age-Adjusted Rate*	
		Michigan (2003)	US-SEER (2002)
Total	5,680	56.1	54.9
Males	3,174	72.9	73.5
White Males	2,716	70.7	72.7
Black Males	438	98.5	95.7
Females	2,506	43.9	41.5
White Females	2,168	43.5	42.6
Black Females	300	47.2	40.2

\*Rate per 100,000 race- and gender-specific population.

Table 31.

### Lung Cancer Incidence Rates by *Gender*, Michigan 2002 vs. US 2002

	Number in Michigan	Age-Adjusted Rate*	
		Michigan (2002)	US-SEER (2002)
Total	7,020	70.1	62.1
Males	3,892	89.3	77.8
White Males	3,308	85.9	77.1
Black Males	534	120.8	110.4
Females	3,126	56.2	50.8
White Females	2,666	54.9	52.4
Black Females	415	66.0	59.9

\*Rate per 100,000 race- and gender-specific population.

Table 32.

## Age-specific Lung Cancer Mortality Rates by *Gender*, Michigan 2003

	Total		Males		Females	
	Number	Rate*	Number	Rate*	Number	Rate*
25-39 Years	25	1.2	16	1.6	9	0.9
40-49 Years	264	16.6	153	19.4	111	13.8
50-64 Years	1,387	82.9	800	97.8	587	68.6
65 Years and Over	4,004	323.8	2,205	430.9	1,799	248.2

\*Rate per 100,000 age- and gender-specific population.

Table 33.

## Age-specific Lung Cancer Incidence Rates by *Gender*, Michigan 2002

	Total		Males		Females	
	Number	Rate*	Number	Rate*	Number	Rate*
25-39 Years	44	2.1	24	2.3	20	1.9
40-49 Years	360	22.8	200	25.6	160	20.0
50-64 Years	1,966	121.8	1,106	140.2	860	104.3
65 Years and Over	4,649	377.4	2,562	502.0	2,085	288.9

\*Rate per 100,000 age- and gender-specific population.

Table 34.

Lung Cancer Five-Year Relative Survival Rates  
by Stage at Diagnosis, *Gender* and *Race*, US 1995-2001

	Total %	Males		Females	
		White %	Black %	White %	Black %
All stages	15.3	13.7	11.6	17.7	15.6
Localized	49.5	45.6	40.2	54.1	48.3
Regional	16.2	15.4	13.4	17.6	16.6
Distant	2.1	1.8	1.6	2.3	1.6
Unknown	8.5	7.9	10.2	8.5	10.9

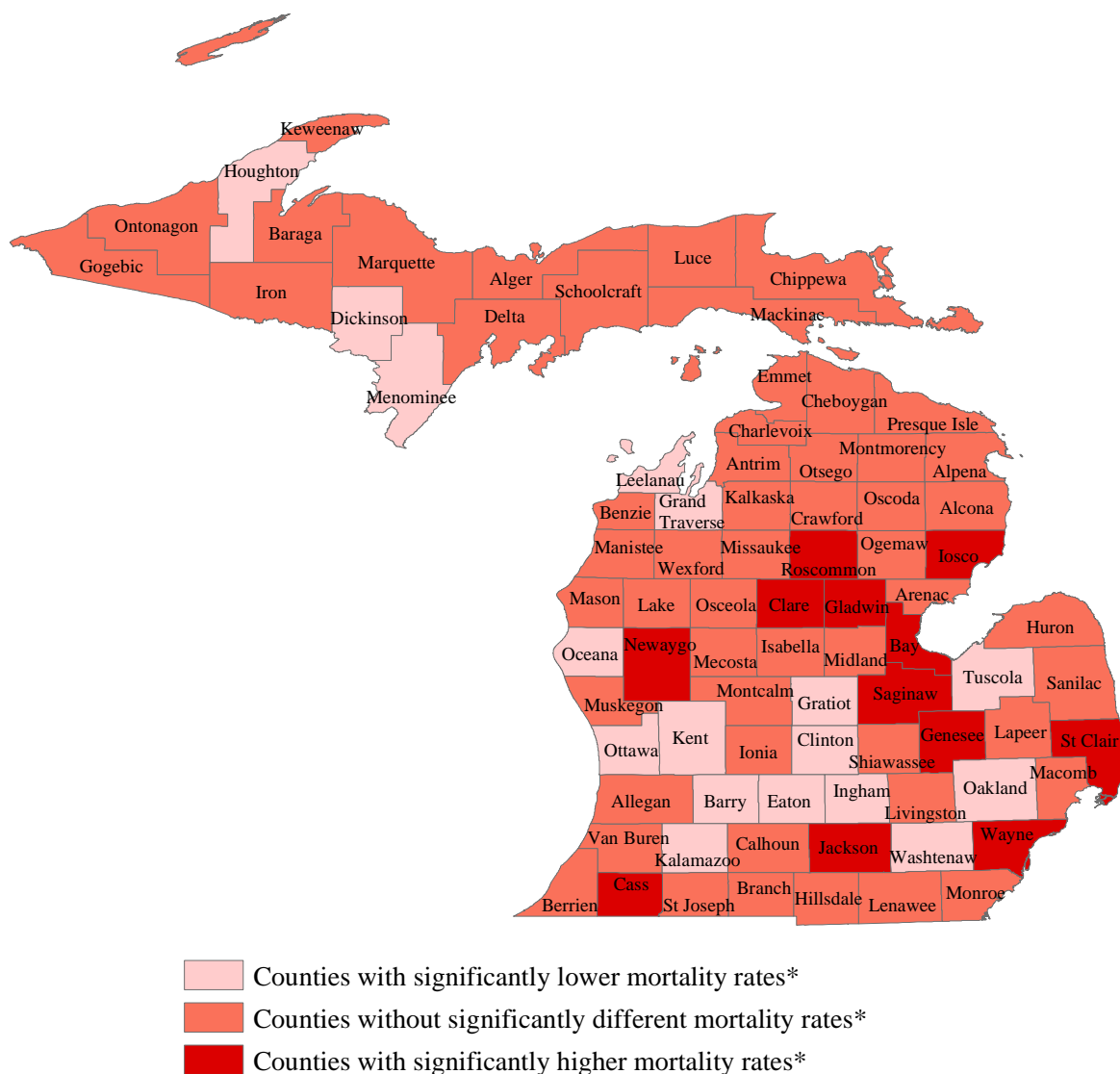
Table 35.

Numbers and Percentages of Invasive Lung Cancer  
(Primary Site) by Stage at Diagnosis and *Race*,  
Michigan 2002

	Total Number	Stage at Diagnosis							
		Localized		Regional		Distant		Unknown	
		Number	%	Number	%	Number	%	Number	%
Total	7,020	1,370	19.5	1,521	21.7	3,085	43.9	1,044	14.9
Whites	5,976	1,210	20.2	1,305	21.8	2,561	42.9	900	15.1
Blacks	949	144	15.2	196	20.7	483	50.9	126	13.3

Figure 10.

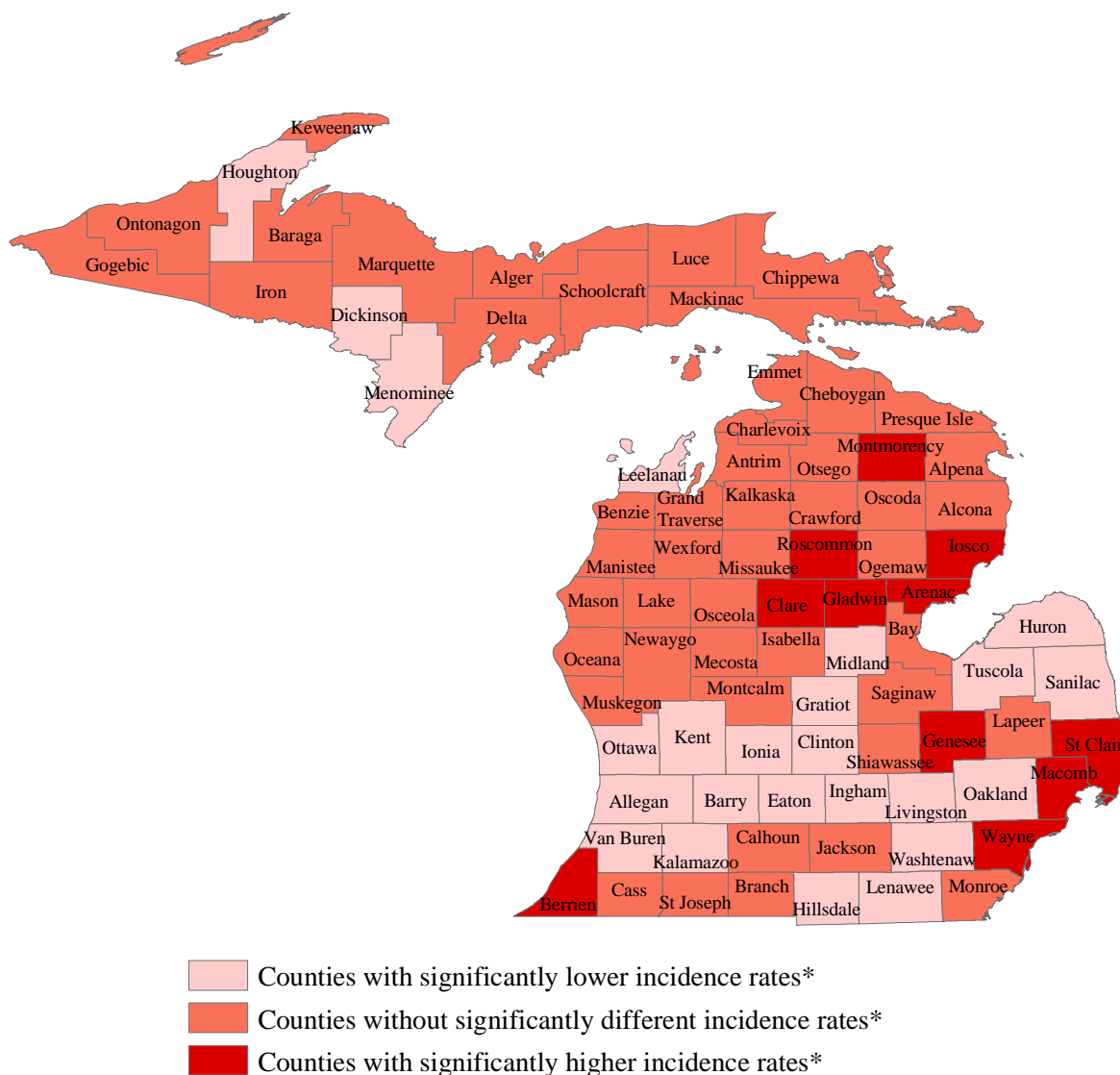
## Lung Cancer Mortality Rates by County, 1994-2003



\*Differences in age-adjusted mortality rates were statistically tested at 95% confidence levels to compare each county with the all-county rate.

Figure 11.

## Lung Cancer Incidence Rates by County, 1993-2002



\*Differences in age-adjusted incidence rates were statistically tested at 95% confidence levels to compare each county with the all-county rate.

Figure 12.

## Percentage of Lung Cancer Cases Localized at Diagnosis by County

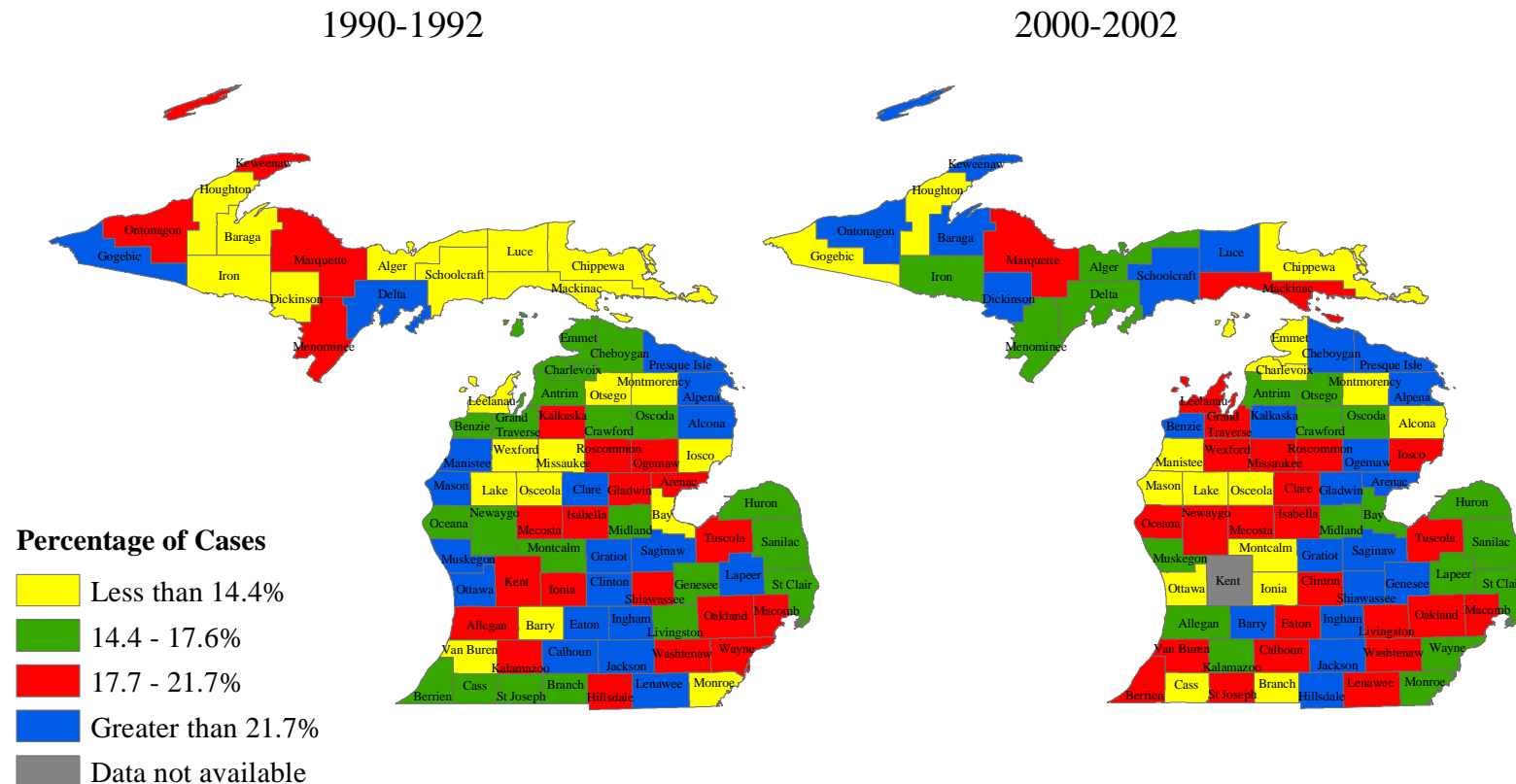


Table 36.

Estimated Number of Prostate Cancer Deaths and  
New Prostate Cancer Cases,  
Michigan 2005

Deaths	1,000
New Cases	7,650

Table 37.

Number of Prostate Cancer Deaths and  
New Prostate Cancer Cases by *Age Group*,  
Michigan 2002-03

	All Ages	Under 35	35-54	55-74	75 and Over
Deaths, 2003	985	0	18	265	702
New Cases, 2002	8,676	2	877	5,571	2,226



Table 38.

## Prostate Cancer Mortality Rates, Michigan 2003 vs. US 2002

	Number in Michigan	Age-Adjusted Rate*	
		Michigan (2003)	US-SEER (2002)
Total	985	25.5	28.1
Whites	809	23.6	25.8
Blacks	169	44.7	63.0

\*Rate per 100,000 race- and gender-specific population.

Table 39.

## Prostate Cancer Incidence Rates, Michigan 2002 vs. US 2002

	Number in Michigan	Age-Adjusted Rate*	
		Michigan (2002)	US-SEER (2002)
Total	8,676	195.0	176.3
Whites	6,768	171.8	171.9
Blacks	1,320	297.2	275.8

\*Rate per 100,000 race- and gender-specific population.

Table 40.

## Age-specific Prostate Cancer Mortality Rates, Michigan 2003

	Number	Rate*
25-39 Years	0	0.0
40-49 Years	4	0.5
50-64 Years	86	10.5
65 Years and Over	895	174.9

\*Rate per 100,000 age- and gender-specific population.

Table 41.

## Age-specific Prostate Cancer Incidence Rates, Michigan 2002

	Number	Rate*
25-39 Years	6	0.6
40-49 Years	276	35.3
50-64 Years	2,986	378.4
65 Years and Over	5,408	1,059.7

\*Rate per 100,000 age- and gender-specific population.

Table 42.

# Prostate Cancer Five-Year Relative Survival Rates by Stage at Diagnosis and *Race*, US 1995-2001

	Total %	White %	Black %
All stages	99.8	99.9	96.7
Localized/Regional	100.0	100.0	100.0
Distant	33.5	32.6	30.3
Unknown	82.7	84.2	77.0

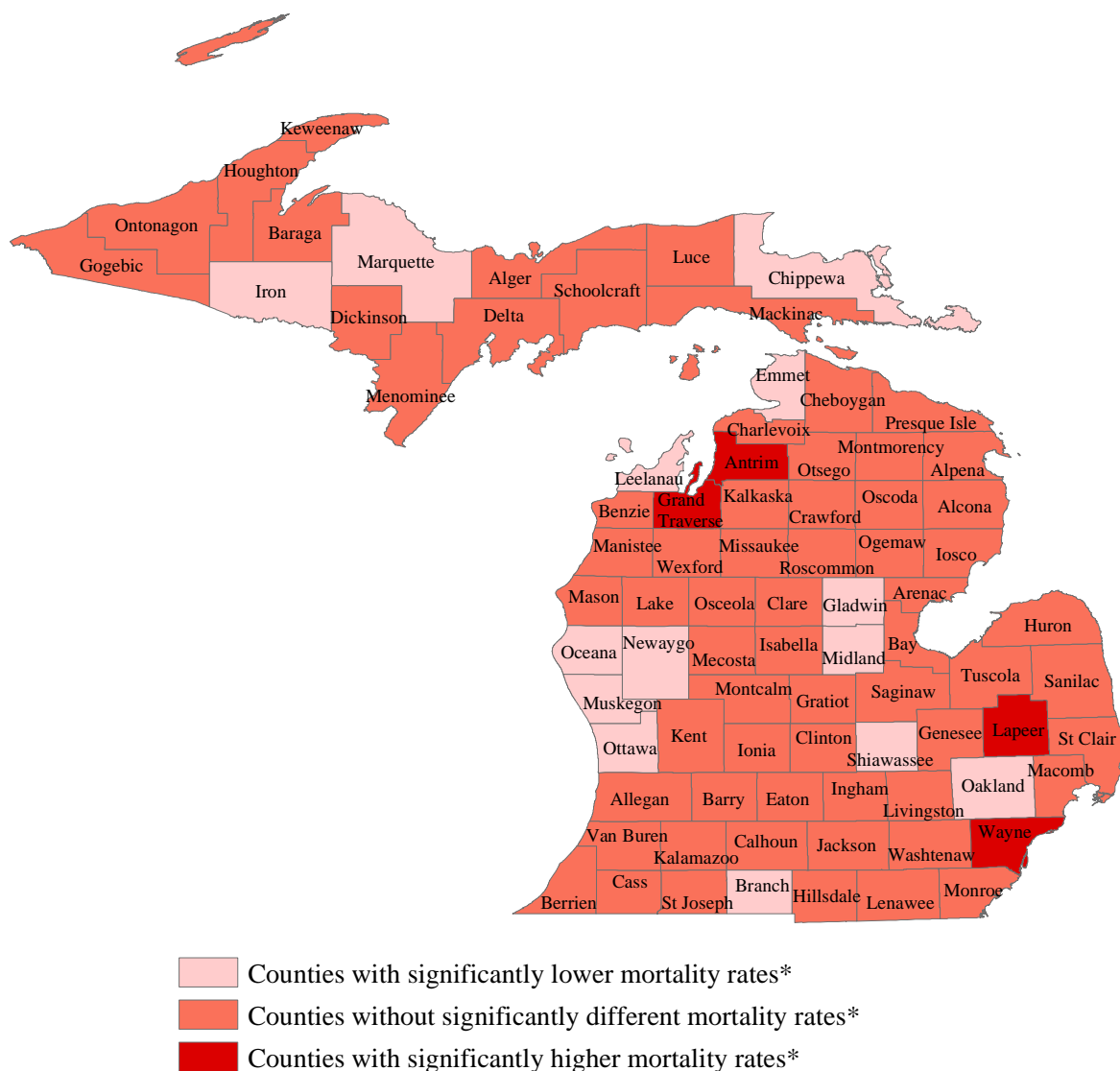
Table 43.

# Numbers and Percentages of Invasive Prostate Cancer (Primary Site) by Stage at Diagnosis and *Race*, Michigan 2002

		Stage at Diagnosis							
	Total Number	Localized		Regional		Distant		Unknown	
		Number	%	Number	%	Number	%	Number	%
Total	8,677	6,951	80.1	700	8.1	192	2.2	834	9.6
Whites	6,768	5,429	80.2	597	8.8	131	1.9	611	9.0
Blacks	1,321	1,079	81.7	89	6.7	56	4.2	97	7.3

Figure 13.

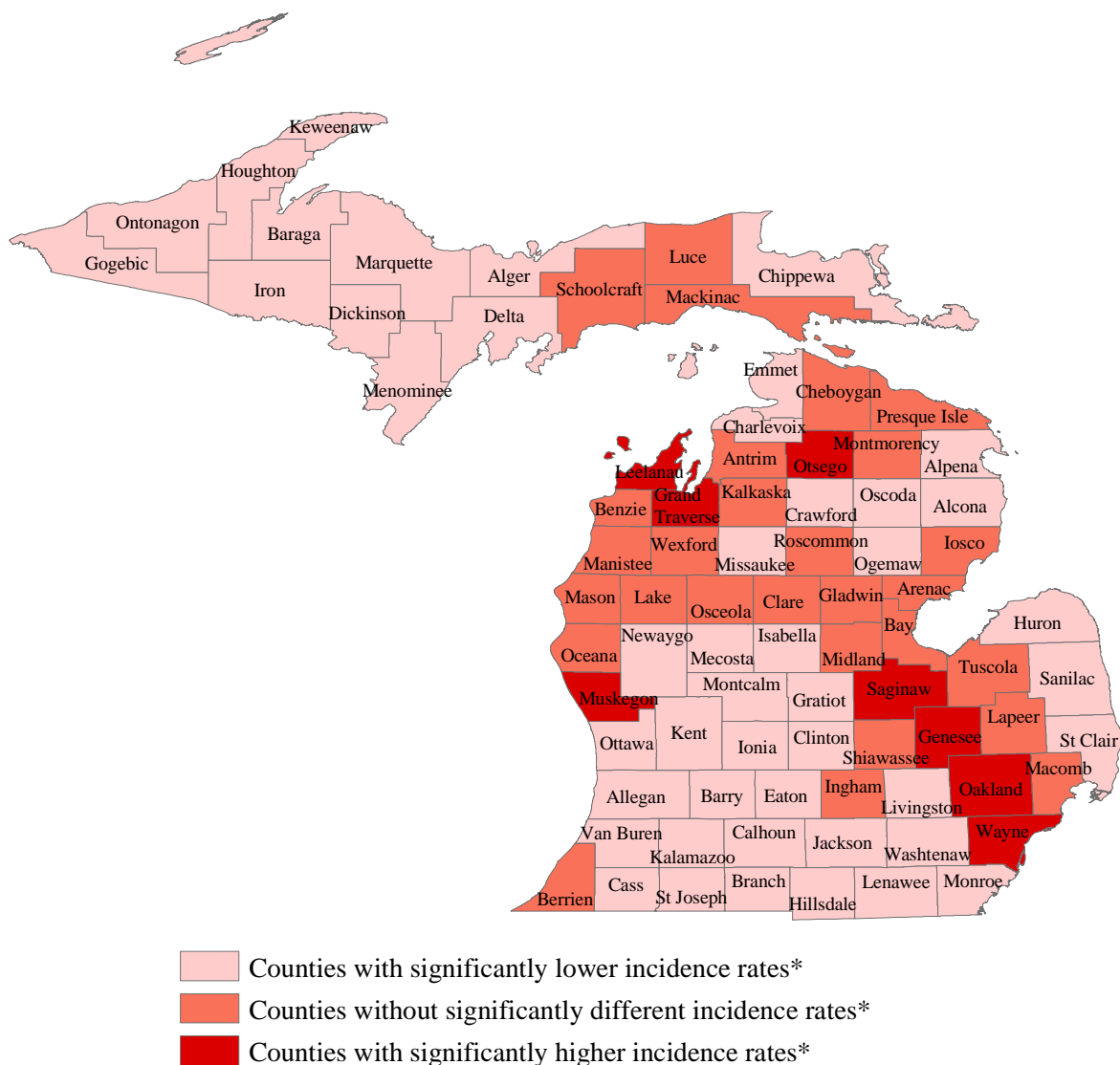
## Prostate Cancer Mortality Rates by County, 1994-2003



\*Differences in age-adjusted mortality rates were statistically tested at 95% confidence levels to compare each county with the all-county rate.

Figure 14.

## Prostate Cancer Incidence Rates by County, 1993-2002



\*Differences in age-adjusted incidence rates were statistically tested at 95% confidence levels to compare each county with the all-county rate.

Figure 15.

## Percentage of Prostate Cancer Cases Localized at Diagnosis by County

